TELETYPE INPUT/OUTPUT PACKAGE
Varian DATA 620/1

Name: see below  Date: June 1, 1969
Function: Teletype input/output
Programmer: Barry J. Pollack
Core Requirements: see below (Total, all routines: 331 or 511)
Special Equipment: TTY
Lead Point: 11265
Source: Blocks 2010-46
Object: Blockn 2504-05

Description:

These routines provide the ability to communicate with the teletype:
input/output of character strings, decimal numbers, octal numbers and single
characters.

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All routines use the single character input/output routines and common
data area.

Character strings must be terminated with an escape character (ESC) for
both input and output.  ROBOUT is interpreted as backspace character.

Numeric strings may be terminated with any non-numeric character on
input.  ROBOUT is interpreted to restart numeric input.
Name: CHMI
Function: Character string input
Core Requirements: 53 or 65
Uses constants: N233, N334, N377, TTY1, TTY2

Description:

A sequence of characters is accepted from the teletype (and echoed) until an ESC is typed. Typing "ABOUT" has the effect of backspace character. Characters are packed two to a word, left justified.

Calling sequence:

LDRI CBUF
LDX MCHR
CALL CHMI

Where,
CBUF = Address of character buffer
MCHR = Maximum number of characters to be stored in CBUF (must be > 0)
Name: CHSO, CHSD
Function: Character string output
Core Requirements: 16 or 44
Used constants: 3217, 3215, 3233, 4777

Description:

A sequence of characters is typed on the teletype until an ESC is encountered. CHSO then types a carriage return, line feed and returns. CHSD returns immediately. Characters must be packed two to a word, left justified, and the final character must be ESC. The routine does not check to make sure the characters are valid teletype codes.

Calling sequence:

LOAD CHUF
CALL CHSO
LOAD CHUF
CALL CHSD

Where:

CHUF = Address of character buffer
Name: DEC1
Function: Decimal integer input
Core Requirements: 67 or 103
Uses constants: N002, N003, N012, N205, N206, N272, TTY1, TTY2, TTY3

Description:

An optionally signed decimal integer between -32767 and +32767 is read from the teletype (and echoed). The integer is terminated by the first non-numeric character typed. DEC1 returns with the integer in A and the terminating character (not echoed) in X. X is returned non-zero if a number was input and is zero otherwise. Typing RUNOUT restarts the routine.

Calling sequence:

CALL DEC1

Name: DEC2
Function: Decimal integer output
Core Requirements: 49 or 50
Uses constants: N255, N260, N004, TTY1

Description:

A (possibly signed) decimal integer between -32767 and +32767 is typed on the teletype. The integer must be in A upon entry to the routine.

Calling sequence:

LDA NUM
CALL DEC2

Where,

NUM = Number to be output
Base: OCT1
Function: Octal number input
Core Requirements: 61 or 75
Uses constants: N302, N303, N310, N317, N249, N343, N270, TRY

Description:

An optionally signed octal number is read from the teletype (and echoed). The number is terminated by the first non-octal character typed. OCT1 returns with the number in A and the terminating character (not echoed) in X. 0 is returned non-zero if a number was input and is zero otherwise. Typing ROBUST restarts the routine.

Calling Sequence:

CALL OCT1

Base: OCT0
Function: Octal number output
Core Requirements: 16 or 20
Uses Constants: N506, N260

Description:

An unsigned 6-digit octal number is typed on the teletype. The number must be in A upon entry to the routine.

Calling Sequence:

LDA NUM
CALL OCT0

Where:

NUM = Number to be output
Name: TTIA, TTIA, TTIB, TTIB
Function: Single character input/output from A or B
Core Requirements, each routine: 9 or 11
10 8
Uses constants: (uses no constants)

Description:

TTIA and TTIB read a single character from the teletype and insert it right justified in A (8).

TTOA and TTOR type a single character on the teletype. The character must be right justified in A (8). The character is not checked to make sure it is a valid teletype code.

The routines do not alter any other registers than those specified for input.

Calling sequence:

CALL TTIA CALL TTIB
LDA CHAR LDB CHAR
CALL TTOA CALL TTOR

where,

CHAR = Character to be output

Name: DATA
Function: Common data area
Core Requirements: 14 or 16
10 8
Uses constants: (uses no constants)

Description:

DATA is composed of all constants and temporaries used by the teletype input/output package. Only those portions of DATA which are referenced need be in core at execution time.